

IN THE CLAIMS:

1. (Currently Amended) A method for treating hardly-decomposable-substance-containing water, which comprises ~~the steps of~~

(B) adsorption treatment by adding an adsorbent to raw water containing a hardly decomposable substance (~~treatment raw water~~) to cause the hardly decomposable substance to be adsorbed on said adsorbent (~~adsorption treatment step~~),

(C) a plurality of membrane filtering treatments thereby separating [[a]] permeated liquid by passing the adsorbent-containing water through a plurality of filter ~~membrane membranes~~ to concentrate the adsorbent with adsorbing said hardly decomposable substance adsorbed thereon (~~membrane filtering treatment step~~), and

(D) chemically decomposing the hardly decomposable substance adsorbed on said concentrated adsorbent with a peroxide without any ~~operation of~~ desorption from said adsorbent (~~chemical decomposition step~~).

2. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited claim 1, wherein ~~the step (D)~~ uses said peroxide is used in an amount of at least 100 times larger in molar relative to that of said hardly decomposable substance.

3. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, which further comprises ~~the step of~~

(A) a membrane concentrating treatment separating [[a]] permeated liquid from the water containing the hardly decomposable substance by passing it through a reverse osmosis membrane (~~RO membrane~~) or a nano-filter membrane (~~NF membrane~~), to concentrate the hardly decomposable substance (~~membrane concentrating treatment step~~).

4. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, which further comprises ~~the step of~~

(E) chlorine neutralization by neutralizing chlorine in the water containing the hardly decomposable substance (~~chlorine neutralization step~~).

5. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, which further comprises ~~the step of~~

(F) photodegradation by carrying out irradiation with ultraviolet light to decompose the hardly decomposable substance (~~photodegradation step~~).

6. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, which comprises ~~the step of~~

(G) backwashing the filter ~~membrane~~ membranes used in said membrane filtering treatments step (C), to free the adsorbent with adsorbing the hardly decomposable substance adsorbed thereon from said filter membrane (~~backwash step~~).

7. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, which further comprises ~~the step of~~

(H) flocculation separation by adding a flocculating agent to water containing the adsorbent with adsorbing the hardly decomposable substance adsorbed thereon, to flocculate and separate the adsorbent with adsorbing the hardly decomposable substance adsorbed thereon (~~flocculation separation step~~).

8. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, wherein the adsorbent ~~to be added in said step (B)~~ is one inorganic adsorbent, or two or more inorganic adsorbents, which is or are selected from the group consisting of titanium dioxide, zeolite, acid clay, activated clay, diatomite, metal oxide, metal powder, activated carbon and carbon black.

9. (Original) The method for treating hardly-decomposable-substance-containing water as recited in claim 8, wherein the adsorbent to be added in said step (B) is titanium dioxide.

10. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, wherein ~~[[the]]~~ each filter membrane ~~for use in said step~~

(C) is selected from the group consisting of an ultrafilter membrane (~~UF-membrane~~), a nano-filter membrane (~~NF-membrane~~), a microfiltration membrane (~~MF-membrane~~) and a reverse osmosis membrane (~~RO-membrane~~).

11. (Currently Amended) The method for treating hardly-decomposable-substance-containing water as recited in claim 1, wherein the peroxide ~~for use in said step (D)~~ is a persulfate.

12. (Currently Amended) A method for treating hardly-decomposable-substance-containing water as recited in claim ~~[[1]]~~ 3, wherein at least part of the hardly decomposable substance concentrated in ~~said step (A)~~ the membrane concentrating treatment and/or the adsorbent with adsorbing the hardly decomposable substance adsorbed thereon concentrated in ~~said step (C)~~ is returned to the raw water containing the hardly decomposable substance (~~treatment raw water~~) or ~~a step upstream of the step before (A) or the step (C)~~.

13. (Withdrawn) An apparatus for treating hardly-decomposable-substance-containing water, which comprises

an adsorbent adding section for adding an adsorbent to water containing a hardly decomposable substance (treatment raw water),

a membrane filtering treatment section for separating a permeated liquid through a filter membrane to concentrate the adsorbent adsorbing said hardly decomposable substance, and

a chemical decomposition treatment section for oxidation-decomposing said hardly decomposable substance adsorbed on said adsorbent with a peroxide.

14. (Withdrawn) An apparatus for treating hardly-decomposable-substance-containing water, comprising

a reducing substance introduction section for introducing a reducing substance to water containing a hardly decomposable substance (treatment raw water) to neutralize chlorine in said water,

a membrane concentrating treatment section for separating a permeated liquid from the

water containing a hardly decomposable substance through a reverse osmosis membrane (RO membrane) or a nano-filter membrane (NF membrane) to concentrate the hardly decomposable substance,

an adsorbent adding section for adding an adsorbent to said hardly decomposable substance concentrated, to cause the adsorbent to adsorb the hardly decomposable substance,

a membrane filtering treatment section for separating a permeated liquid through a filter membrane to concentrate the adsorbent adsorbing said hardly decomposable substance,

a flocculating agent adding section for adding a flocculating agent to water containing the adsorbent adsorbing said concentrated hardly decomposable substance, to flocculate the adsorbent adsorbing said hardly decomposable substance,

a solid-liquid separating section for separating the adsorbent adsorbing the hardly decomposable substance and being flocculated by said flocculating agent, and

a chemical decomposition treatment section for oxidation-decomposing the hardly decomposable substance adsorbed on said adsorbent separated, with a peroxide.

15. (Currently Amended) A method for concentrating a hardly decomposable substance in hardly-decomposable-substance-containing water, which comprises ~~the steps of~~

(B) adsorption treatment by adding an adsorbent to raw water containing a hardly decomposable substance (~~treatment raw water~~) to cause the hardly decomposable substance to be adsorbed on said adsorbent (~~adsorption treatment step~~), and

(C) a plurality of membrane filtering treatments thereby separating [[a]] permeated liquid by passing the adsorbent-containing water through a plurality of filter membrane membranes to concentrate the adsorbent with adsorbing said hardly decomposable substance adsorbed thereon (~~membrane filtering treatment step~~).

16. (Currently Amended) The method for concentrating a hardly decomposable substance in hardly-decomposable-substance-containing water as recited in claim 15, which further comprises ~~the step of~~

(A) a membrane concentrating treatment separating [[a]] permeated liquid from the water containing a hardly decomposable substance by passing it through a reverse osmosis membrane

(~~RO-membrane~~) or a nano-filter membrane (~~NF-membrane~~), to concentrate the hardly decomposable substance (~~membrane-concentrating treatment step~~).

17. (Currently Amended) The method for concentrating a hardly decomposable substance in hardly-decomposable-substance-containing water as recited in claim 16, wherein at least part of the hardly decomposable substance concentrated in ~~said step~~ (A) is returned to said raw water containing a hardly decomposable substance (~~treatment raw water~~).

18. (Previously Presented) A method for treating water containing a hardly decomposable substance, which comprises irradiating a hardly decomposable substance concentrated by the method for concentrating a hardly decomposable substance in hardly-decomposable-substance-containing water as recited in claim 15, with light to decompose the hardly decomposable substance.